

Applicant : William K. Lie et al.
Serial No. : 09/982,720
Filed : October 18, 2001
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Attorney's Docket No.: 10638-025001

Amendments to the Drawings:

The attached replacement sheets of drawings include changes to Figures 12, 15, 16, and 18 and replace the original sheets including Figures 12, 13, 15, 16, and 18.

In Figure 12, the reference number 32' was deleted together with the article to which it referred.

In Figure 15, the reference number 34 was changed to 35, and the reference number 30 was changed to 37.

In Figure 16, the reference number 40 was changed to 41.

In Figure 18, the reference number 64 was deleted.

Attachments following last page of this Amendment:

Replacement Sheets (2 pages).

Annotated Sheets (2 pages).

REMARKS

Claims 1-27, 30 and 37 are pending. Claims 19-23, 26, and 27 are withdrawn from consideration. Thus claims 1-18, 24, 25, 30, and 37 are under examination. Please consider the following remarks.

Drawings

The drawings are objected to because the prior art in Figure 3 looks no different than the invention shown in Figures 2, 12, 13, and 15-20. Figures 2, 12, 13, and 15-20 are further objected to as using the same drawing to show different embodiments of the same invention. Applicants disagree with the above characterization of the drawings. Rather, the drawings must be viewed together with the reference numbers and the text of the specification. While the outlines of the referred to drawings are, in some instances, the same, in each instance, the drawings include a unique set of reference numbers that in combination with the text of the application adequately describe the specific embodiment depicted in the drawing. Accordingly, Applicants assert that each of Figures 2, 3, 12, 13, and 15-20 satisfy 37 CFR 1.83 by showing the specified features. In view of the foregoing, Applicants request that the corresponding objection be withdrawn.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include reference signs not mentioned in the description. Figures 12 and 18 have been amended as described above to address this objection.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because a reference character has been used to designate two different features. Figures 16 and 12 have been amended as described above to address this objection.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because different reference characters have been used to designate loop yarn and different characters have been used to designate stitch yarn. Rule 1.84(p)(4) requires parts of an invention depicted in more than one view to be designated by the same reference numbers. Because the drawings objected to illustrate different embodiments (rather than simply different views), it is proper in

each instance to use different reference characters. Accordingly, Applicants request that the corresponding objection be withdrawn.

35 U.S.C. §103

Applicants' have claimed a double-face velour fabric article. The article includes a fabric body with a technical face formed by a filament stitch yarn and a technical back formed by a filament loop yarn. The filament stitch yarn includes heat sensitive material, and the fabric body has a velour surface formed at both the technical back and the technical face. The heat sensitive material responds to application of heat during processing to increase tortuosity, with a result of the fabric body having a permeability of about $80 \text{ ft}^3/\text{ft}^2/\text{min}$ or less under a pressure difference of $\frac{1}{2}$ inch of water across the fabric body. Applicants' claimed invention can be used to provide improved dynamic insulation performance of a fabric article.

Claims 1-9, 16-18, 25, 30, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,103,518 to Lombardi *et al.* ("Lombardi") in view of U.S. Patent No. 3,837,943 to Ploch *et al.* ("Ploch"). Lombardi is cited for disclosing a knitting process which produces terry loops on the technical face and technical back by forming the loops in the base fabric while the base fabric is being knitted using a circular knitting machine. Ploch is then cited for teaching the use of heat sensitive fibers as a "stitch yarn" to bond pile yarns to a base.

Neither Lombardi nor Ploch teaches or fairly suggests *a fabric body with a technical face formed by a filament stitch yarn that includes heat sensitive material*, as recited in Applicants' claim 1. As acknowledged by the Examiner, Lombardi does not teach stitch yarns that include a heat sensitive material. The Examiner asserts that this deficiency is remedied by Ploch's teaching of heat sensitive yarns. However, Ploch does not describe filament stitch yarns that are used to form the technical face of a fabric body, nor would Ploch have suggested to the artisan to use heat sensitive materials in such yarns.

Instead, Ploch describes sewing a fabric (such as a pile product) onto a pre-formed base (e.g., ground fabric) by means of longitudinally extending parallel stitched seams. The Examiner asserts that it would be obvious to one having ordinary skill in the art to modify the stitch yarn in

the fabric taught by Lombardi with the thermally sensitive filament disclosed in Ploch, and further asserts that the artisan would have made this modification to increase the bond between the ground fabric and the pile yarn, producing a stable and wear resistant compound fabric. (See Office Action, page 5.) Applicants disagree.

Ploch does not suggest that heat sensitive yarns be used to form one of the faces of the fabric – instead, in Ploch such yarns are used merely to form lines of stitches that interconnect two separate fabrics. Thus, it would not have been obvious to the artisan to replace Lombardi's ground yarns with yarns which Ploch uses for a very different purpose. There would have been no reason for the artisan to believe that Ploch's yarns would have functioned well, or even adequately, as ground yarns in Lombardi's fabric construction.

Nor would the artisan have been motivated to make this modification “to increase the bond between the ground fabric and the pile yarn, producing a stable and wear resistant compound fabric,” as asserted by the Examiner. The terry construction disclosed in Lombardi “contemplates the formation of terry loops which are knitted jointly with a ground yarn into the base or ground fabric and thus securely anchored in the knitted construction.” (Lombardi, col. 1, lines 16-19.) Because Lombardi discloses a method of “securely anchoring” terry loops to a ground fabric, one of skill in the art would have no motivation to modify the filaments disclosed in Lombardi with the thermally sensitive filament disclosed in Ploch.

Obviousness can only be established by combining or modifying the teaching of the prior art where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. (See M.P.E.P. §2143.01) Motivation cannot come from the invention itself. (See, e.g., *Heidelberger Druckmaschinen AG v. Hantscho Commercial Products, Inc.*, 21 F.3d 1068, 1072 (Fed. Cir. 1993). Nor can *prima facie* obviousness be established by “using hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988).

The Examiner has not provided evidence of motivation to combine or modify the references to arrive at Applicants' claimed invention. Instead, the Applicants themselves discovered that the use of a filament stitch yarn that includes heat sensitive material to form the

technical face of a fabric body allows the heat sensitive material to respond to application of heat during processing to increase tortuosity and reduce the permeability of the fabric body.

Moreover, it is Applicants who discovered that this increase in tortuosity provides improved dynamic insulation performance when the fabric body is used in a garment. The Examiner asserts that the hypothetical fabric created by the Examiner by combining Lombardi and Ploch would "inherently" possess Applicants' claimed permeability of about $80 \text{ ft}^3/\text{ft}^2/\text{min}$ or less under a pressure difference of $\frac{1}{2}$ inch of water across the fabric body. However, even if Lombardi and Ploch could be properly combined, which Applicants do not concede, it is unclear what sort of fabric would result, since Ploch does not suggest the use of heat sensitive yarns as pile yarns, ground yarns or stitch yarns (as that term is used by Applicants). Thus, there is no basis – even theoretically – for the Examiner's assertion of inherency.

Because the Examiner has not provided evidence of a motivation to combine the references, the obviousness rejection is improper. Accordingly, Applicants request that this rejection be withdrawn.

Claims 10-15 and claim 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lombardi in view of Ploch in further view of one of U.S. Patent No. 5,557,950 to Richards *et al.* ("Richards"), U.S. Patent No. 5,520,022 to Callaway ("Callaway"), or U.S. Patent Application No. 2002/0124365 A1 to Wood *et al.* ("Wood"). Claims 10-15 and 24 all include a fabric body having a technical face formed by a filament stitch yarn including heat sensitive material and a technical back formed by a filament loop yarn where the filament stitch yarn is joined with the loop yarn in a terry like construction. None of Richards, Callaway, or Wood provide the motivation to use a heat sensitive filament stitch yarn to form the technical face of a fabric body, as featured in the pending claims, nor are these references relied upon for such a teaching. Without such a teaching, the combinations of references above fail to provide a *prima facie* case of obviousness. Accordingly, Applicants request that the corresponding rejections be withdrawn.

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Attached is a check for the requisite fees. Please apply any charges or credits to deposit account 06-1050, referencing attorney docket number 10638-025001.

Respectfully submitted,

Date:

January 26, 2004

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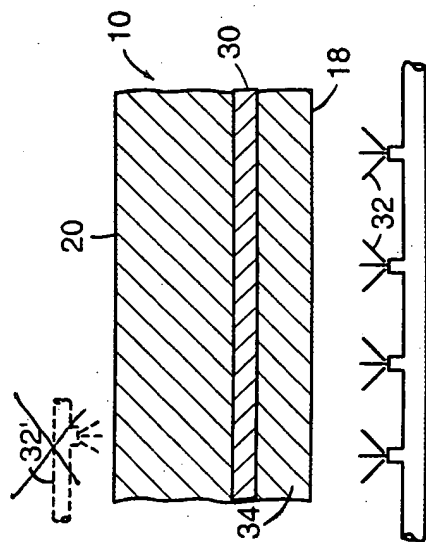


FIG. 12

THERMAL
 INSULATION
 (CLDS)

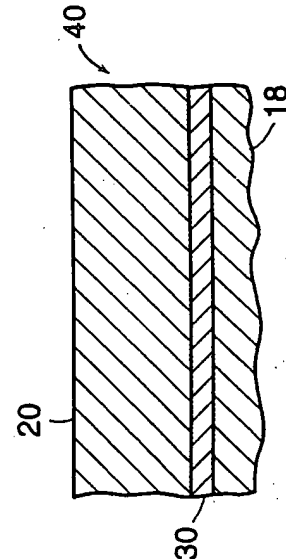


FIG. 13

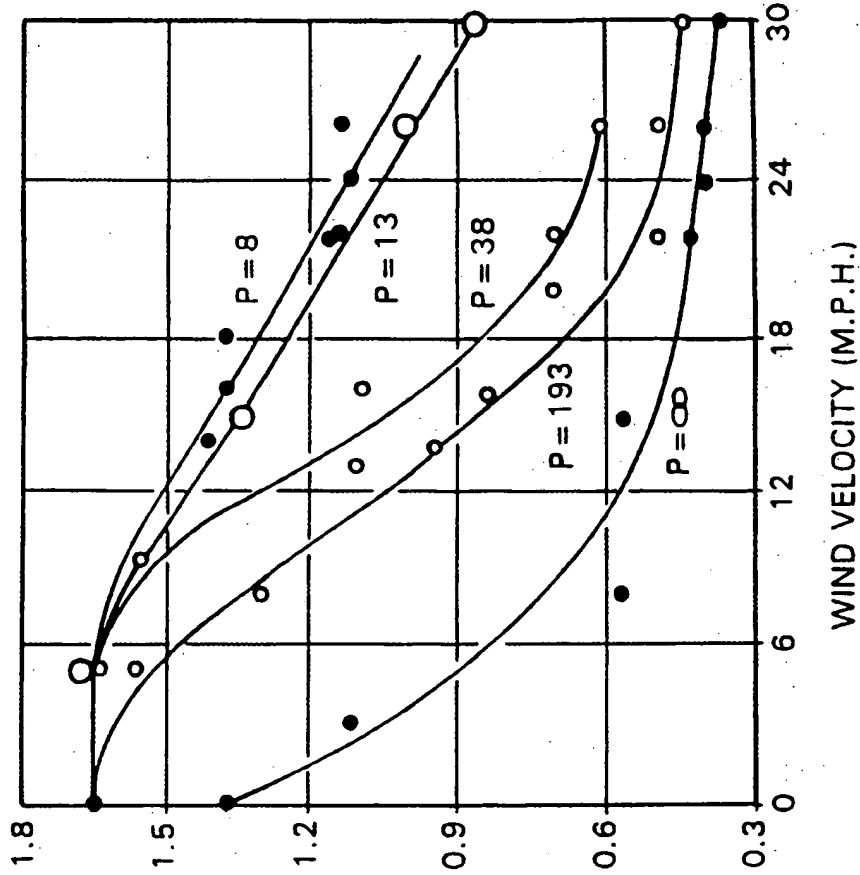


FIG. 14

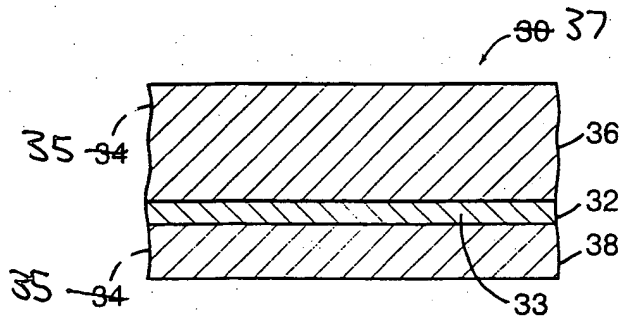


FIG. 15

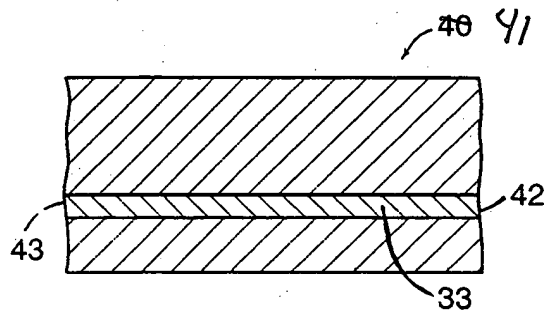


FIG. 16

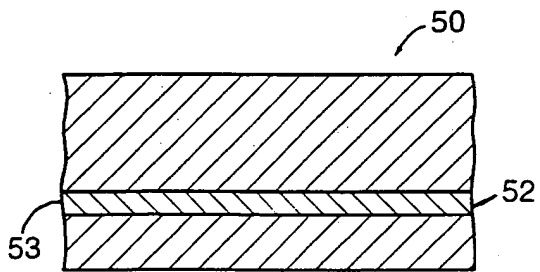


FIG. 17

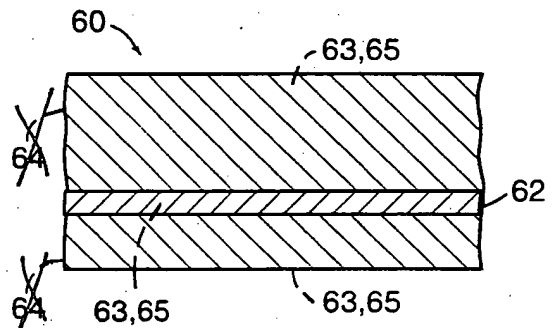


FIG. 18

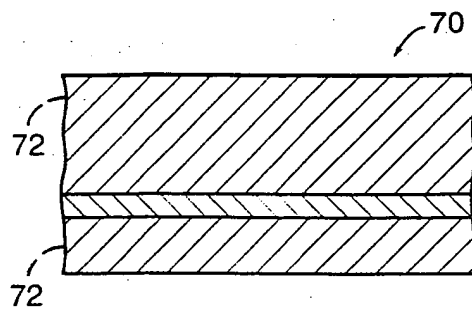


FIG. 19

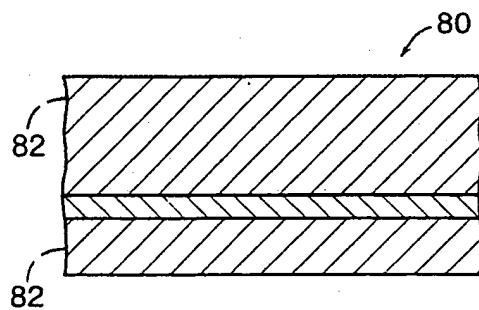


FIG. 20